

4. In general terms, briefly discuss the construction and operational energy requirements and conservation potential of the various alternatives under consideration. Indicate whether the savings in operational energy are greater than the energy required to construct the facility.

The energy requirements needed to construct this project will consist of fuel used by construction equipment, fuel used to deliver construction materials, and fuel used by vehicles detoured from the Claude Allouez Bridge to other local bridges (i.e. STH 172) for any alternative that would close the downtown crossing during the construction process. Additional fuel consumption for some alternatives will be due to traffic congestion.

With respect to the construction of the bridge, the two-bridge alternative would generally be expected to consume more energy for construction activities than a single bridge. The No Build alternative, depending on the length of any potential bridge closure during repair activities (vehicle fuel consumption due to detouring), would probably use the least amount of fuel in the short-term but would ultimately require either major rehabilitation or total replacement in future years. The No Build alternative would require increasing amounts of future energy consumption due to increasing traffic congestion and maintenance activities.

It is expected that the long-term, post construction energy requirements of the Build alternatives will be less due to increased roadway efficiency, reduced traffic delays, and reduced energy requirements for construction equipment performing maintenance and repair functions.

Overall, the long-term savings are expected to outweigh the short-term energy requirements for construction.

5. Describe existing land use (attach land use maps if available)

- a. **Land use in immediate area.** The project is located in the downtown business district. Land use along the project is primarily Commercial, but does have areas of Industrial, Multi-family, Parks and Recreation, and Institutional (St. Norbert College). Refer to the Existing Land Use Map illustrated as [\(Exhibit 12\)](#) obtained from *City of De Pere Comprehensive Plan* dated February 28, 2000 (Prepared by: Community Development Systems). [\(Exhibit 13\)](#) is a lot-by-lot delineation of the land use in the immediate area impacted by the project.
- b. **Land use in area surrounding project area.** Land use in area surrounding the project corridor is a mixture of residential and commercial use.